ITEM 28 FY90
CEL-DS1
October 24, 1988

SALIENT CHARACTERISTICS

SIGNAL GENERATOR, CW (250 kHz to 250 MHz)

GE0TK-B

1.0 GENERAL DESCRIPTION This procurement requires a solid-state, CW Signal Generator capable of generating a constant-amplitude sine wave with a variable frequency range of 250 kHz to 250 MHz.

2.0 CLASSIFICATION The equipment shall meet the requirements of MIL-T-28800D, Type III, Class 5, Style E, Color R for Navy shipboard, submarine, and shore applications with the following modifications and exceptions:

a. The non-operating temperature requirement is limited to the range of -40˚C to +70˚C.

b. The relative humidity requirement is limited to 95% noncondensating.

c. The operating and non-operating altitude requirements are not invoked.

d. The EMI requirement is not invoked.

e. The warm-up time is extended to one hour.

3.0 OPERATIONAL REQUIREMENTS The equipment shall be capable of generating signals within the parameters and accuracies specified herein.

3.1 Output Characteristics

3.1.1 Frequency

3.1.1.1 Range: At least 250 kHz to 250 MHz with a 50 kHz reference frequency output
3.1.1.2 Resolution: At least 3 digit display
3.1.1.3 Accuracy: ±0.7 of least significant digit for indicated frequency

3.1.2 Amplitude

3.1.2.1 Range: At least 5.0 mV to 5.0 Vp-p into a 50 ohm termination
3.1.2.2 Accuracy: At least ±5% relative to reference frequency
3.1.2.3 Flatness (peak-to-peak, 50 kHz reference): At least ±1% from 250 kHz to 100 MHz; at least ±3% from 100 to 250 MHz

3.1.3 Harmonics: At least -35 dBc

4.0 GENERAL REQUIREMENTS

4.1 Power: 115/230 Vac ±10%, 50 to 440 Hz ±10%, 150 VA maximum

4.2 Dimensions: The total volume of the unit shall not exceed 6,600 cubic cm (400 cubic in ).

4.3 Weight: The overall weight of the unit shall not exceed 5 kg (11 pounds ).

4.4 Calibration Interval: The calibration interval shall be at least 12 months minimum. The equipment shall be within all accuracy requirements specified herein, with a 72% or greater confidence factor following a calibration interval of 12 months.